EXAMPLE 2

Effect of Triclosan on Bone Loss in Vitro

Method

The experimental method used is fully described in Meghi,S et al. Brit. J. Cancer (1988) 58, pp 17-21. Neonatal mouse calvaria were isolated with minimum trauma and maintained in a nutrient medium appropriate for cell culture (DMEM+15% horse serum) at 27° C. in 100% humidity, the medium also containing the materials under test. The pH was maintained in an atmosphere of 5% CO_2. After 24 h the medium was discarded, the calvaria were divided into control and test groups, and the medium was replaced with fresh medium containing the materials under test. Prostaglandin E_2 (PGE_2, 10^{-6}M) was added with or without Triclosan as appropriate to stimulate the release of calcium ions (i.e. bone resorption) from the calvaria. After two days further culture in the test media the release of calcium into the medium from the calvaria was determined by atomic absorption spectroscopy. Calcium release is a measure of bone resorption (i.e. degradation of bone) regulated by the specialised cells (osteoblasts and osteoclasts) on the bone surface. Net calcium release was obtained by subtracting the basal medium calcium level.

Additions	Net Calcium Release (mg/dl)
None (negative control)	0.4
+ PGE_2 (positive control)	3.5*
+ PGE_2 and $2.5.10^{-5}$ M Triclosan	−0.1*
+ PGE_2 and 1.10^{-5} Triclosan	1.4**

(* $P > 0.0001$), (** $P > 0.0005$).

EXAMPLE 3

The test method of Example 2 was repeated, using thrombin, however, as bone loss stimulator, and using indomethacin as a cyclo-oxygenase inhibitor as control.

The following results were obtained:

Additions	Net Calcium Release (mg/dl)
none	0.2
+ thrombin	3.9
+ thrombin and 10^{-6} M indomethacin	0.4
+ thrombin and 5.10^{-5} M Triclosan	−0.6
+ thrombin and 1.10^{-5} M Triclosan	0.2

EXAMPLE 4

The procedure of Example 3 was repeated, also using zinc citrate as addition.

The following results were obtained:

Addition	Net Calcium Release (mg/dl)
none	0.1
thrombin	2.4
+ thrombin and 10^{-6} M indomethacin	0.0
+ thrombin and 2.10^{-4} M zinc citrate	0.8
+ thrombin and 5.10^{-6} Triclosan	0.75
+ thrombin and 2.10^{-4} M zinc citrate and 5.10^{-6} M Triclosan	−0.3*
+ thrombin and 1.10^{-4} M zinc citrate	1.3
+ thrombin and 5.10^{-6} M Triclosan	0.75
+ thrombin and 1.10^{-4} M zinc citrate and 5.10^{-6} M Triclosan	−0.2*
+ thrombin and 5.10^{-5} M zinc citrate	1.4
+ thrombin and 5.10^{-6} M Triclosan	0.75
+ thrombin and 5.10^{-6} M Triclosan and 5.10^{-5} M zinc citrate	−0.4*

(* $p < 0.05$)

I claim:

1. A method for reducing alveolar bone loss leading to a loosening of the teeth and ultimately to the loss of the teeth by administering to the oral cavity of a subject afflicted with alveolar bone loss a composition containing an effective amount of a cyclo-oxygenase inhibitor, wherein the cyclo-oxygenase inhibitor is 2',4,4'-tricholoro-2-hydroxy-diphenylether.

2. The method of claim 1, wherein the composition further comprises an effective antibacterial amount of zinc citrate.

3. The method of claim 1, wherein the composition is in the form of a dentrifice.

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